23-411.fm Page 1 Friday, August 6, 1999 3:00 PM

Cat. No. 23-411

OWNER'S MANUAL

Please read before using this equipment.

Racing Battery Pack AC/DC Charger

for 4.8V/6V/7.2V/9.6V Ni-Cd Battery Packs

RadioShack®

FEATURES

Your RadioShack Racing Battery Pack AC/DC Charger is perfect for charging your radio-controlled racing cars' battery packs. It connects to standard AC power or your vehicle's cigarette-lighter socket, and can fully charge 4.8V, 6V, 7.2V and 9.6V nickel-cadmium Racing Battery Packs in as little as 15 minutes! (High-capacity 7.2V, 1700 mAh and 9.6V, 900 mAh battery packs require more time to fully charge.)

Your charger also includes these features:

DC Reverse-Polarity Input Protection — prevents damage to the charger, the battery pack, and your vehicle's electrical system.

Charging Indicator — lights when the battery pack is charging and automatically turns off when charging is finished.

Two Charging Power Sources — lets you use your vehicle's battery or standard AC power to charge a battery pack.

Start Button — makes battery-pack charging simple.

Thermal Sensor — stops charging automatically if the battery becomes too hot.

WARNING: To reduce the risk of fire or shock hazard, do not expose this product to rain or moisture.

CAUTION

RISK OF ELECTRIC SHOCK.
DO NOT OPEN.

CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER OR BACK. NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED PERSONNEL.

This symbol is intended to alert you to the presence of uninsulated dangerous voltage within the product's enclosure that might be of sufficient magnitude to constitute a risk of electric shock. Do not open the product's case.

This symbol is intended to inform you that important operating and maintenance instructions are included in the literature accompanying this product.

© 1998 Tandy Corporation.
All Rights Reserved.
RadioShack is a registered trademark used by Tandy Corporation.

IMPORTANT SAFETY INSTRUCTIONS

1. **SAVE THESE INSTRUCTIONS** — This manual contains important safety instructions for battery charger Cat. No. 23-411.
2. Before using the battery charger, read all instructions and cautionary markings on the battery charger, the battery, and the product using the battery.
3. **CAUTION** — To reduce risk of injury, charge only Ni-Cd type rechargeable batteries. Other types of batteries may burst, causing personal injury and damage.
4. Charge only one battery pack at a time.
5. Be sure that the battery pack is rated at 4.8, 6, 7.2, or 9.6 volts.
6. Avoid charging fully-charged battery packs. Doing so can damage the battery pack or cause it to lose some of its storage capacity.
7. Charge battery packs only at room temperature (65–80°F). Charging a battery pack in a hot area can permanently reduce the battery pack's power capacity.
8. Do not expose the charger to rain or excessive moisture.

OPERATION

This table shows the estimated typical fast-charging time for battery packs of different capacities:

Capacity	Charging Current (mA)	Charging Time (minutes)
4.8V/6V (600 mAh)	2500	15
7.2V (1200 mAh)	4500	16
7.2V (1700 mAh)	4500	23
9.6V (600 mAh)	2500	15
9.6V (900 mAh)	2500	22

Note: If you are charging *high-capacity* 7.2-volt, 1700 mAh, and 9.6-volt, 900 mAh battery packs, you must run them for two charging cycles to fully charge them.

Before you charge a battery pack, use it until it no longer provides the necessary power.

Warnings:

- To reduce the risk of injury, charge only rechargeable nickel-cadmium battery packs with this charger. Trying to charge other types of battery packs could cause the packs to leak or become very hot and explode, causing injury to bystanders or damage to your charger.
- Do not charge a battery pack that is damaged or leaking.
- Do not cover the vents on the top and back of the charger while charging a battery pack.

CONNECTING TO AC POWER

Plug the charger's power cord into a standard AC outlet. The POWER indicator lights.

ILLUSTRATION
of power cord
w/AC outlet

CONNECTING TO A VEHICLE'S CIGARETTE-LIGHTER SOCKET

Plug the DC cord into your vehicle's cigarette-lighter socket.

ILLUSTRATION
of DC cord
connection

Note: If the charger does not operate when it is connected to the cigarette-lighter socket, remove the DC adapter from the cigarette-lighter socket and check the socket for debris. Also check the fuse in the adapter and your vehicle's fuse block.

CHARGING BATTERY PACKS

1. To charge a 6V battery pack, simply insert it into the compartment on the charger, then skip to Step 3.

ILLUSTRATION
of 6V battery
connection

To charge a 7.2V or 9.6V battery pack, slide its connector into the **CHARGING JACK** socket. If the connector does not fit, turn it over and try again. Do not force it.

ILLUSTRATION
of 7.2 V battery pack
connection

To charge a 4.8V battery pack, plug the small end of the supplied adapter cord fully into the battery pack's connector. Then plug the adapter cord's large end fully into the **CHARGING JACK** socket.

ILLUSTRATION
of 4.8 V battery
pack connection

2. Insert the battery pack into the compartment on the battery charger.
3. Insert **THERMAL SENSOR** into **SENSOR HOLDER**.

ILLUSTRATION
of THERMAL SENSOR
in sensor socket

4. Press **START** to start charging. The CHARGE indicator lights.

   Notes:

   - If the battery pack becomes too hot, the thermal sensor makes charging stop automatically.
   - If the charging time and battery pack's life are both very short, the battery pack might be damaged.

5. When charging is complete, the charger and indicator automatically turn off. Disconnect and remove the battery pack from the charger, then unplug the charger's power cord.

REPLACING THE FUSE

The charger's fuse blows if you connect the DC cord's clamps to the wrong battery terminals. This protects the charger, the battery pack, and your vehicle's electrical system. We recommend that you keep some spare 5-amp, $1^1/_4$-inch slow blow fuses (such as Cat. No. 270-1027) with your charger, in case the fuse blows.

Caution: Do not use a fuse with ratings other than those specified here. Doing so might damage your charger.

If the CHARGE indicator does not light or the charger does not operate when you turn it on, follow these steps to check and replace the fuse.

1. Disconnect and remove the battery pack from the charger.

ILLUSTRATION
of battery pack
disconnection

2. Unplug the AC power cord or remove the DC power cord from your vehicle's cigarette-lighter socket.
3. Twist off the fuse holder's black cap and carefully remove the inner tip, the spring, and the outer tip. If the fuse is blown, replace it with an identically rated 5-amp fuse.

ILLUSTRATION
of open fuse holder
w/fuse

Note: Blown fuses usually are discolored or have a broken center wire.

4. Replace the outer tip, the spring, the inner tip, and the black cap. Tighten the cap securely.

CARE AND MAINTENANCE

Your Racing Battery Pack AC/DC Charger for 4.8V/6V/7.2V/9.6V Ni-Cd Battery Packs is an example of superior design and craftsmanship. The following suggestions will help you care for your charger so you can enjoy it for years.

Keep the charger dry. If it gets wet, wipe it dry immediately. Liquids can contain minerals that corrode electronic circuits.

Use and store the charger only in normal temperature environments. Temperature extremes can shorten the life of electronic devices, damage batteries, and distort or melt plastic parts.

Handle the charger gently and carefully. Dropping it can damage circuit boards and cases and can cause the charger to work improperly.

Keep the charger away from dust and dirt, which can cause premature wear of parts.

Wipe the charger with a damp cloth occasionally to keep it looking new. Do not use harsh chemicals, cleaning solvents, or strong detergents to clean your charger.

Modifying or tampering with the charger's internal components can cause a malfunction and invalidate your charger's warranty. If your charger is not performing as it should, take it to your local RadioShack store for assistance.

23-411.fm Page 9 Friday, August 6, 1999 3:00 PM

SPECIFICATIONS

Charging Current ..... 2.5 Amps for 4.8V, 6V and 9.6V battery
4.5 Amps for 7.2 battery

AC Supply Voltage ..... AC 120V 60 Hz

DC Supply Voltage ..... DC 11–16V

Charging Times: (Fully Discharged Battery Pack)

Minimum Charging Time ..... 15 Minutes

Maximum Charging Time ..... 23 Minutes

Average Charging Time ..... 18 Minutes

Specifications are typical; individual units might vary. Specifications are subject to change and improvement without notice.

23-411.fm Page 10 Friday, August 6, 1999 3:00 PM

NOTES

23-411.fm Page 11 Friday, August 6, 1999 3:00 PM

23-411.fm Page 12 Friday, August 6, 1999 3:00 PM

Limited Ninety-Day Warranty

This product is warranted by RadioShack against manufacturing defects in material and workmanship under normal use for ninety (90) days from the date of purchase from RadioShack company-owned stores and authorized RadioShack franchisees and dealers. EXCEPT AS PROVIDED HEREIN, RadioShack MAKES NO EXPRESS WARRANTIES AND ANY IMPLIED WARRANTIES, INCLUDING THOSE OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, ARE LIMITED IN DURATION TO THE DURATION OF THE WRITTEN LIMITED WARRANTIES CONTAINED HEREIN. EXCEPT AS PROVIDED HEREIN, RadioShack SHALL HAVE NO LIABILITY OR RESPONSIBILITY TO CUSTOMER OR ANY OTHER PERSON OR ENTITY WITH RESPECT TO ANY LIABILITY, LOSS OR DAMAGE CAUSED DIRECTLY OR INDIRECTLY BY USE OR PERFORMANCE OF THE PRODUCT OR ARISING OUT OF ANY BREACH OF THIS WARRANTY, INCLUDING, BUT NOT LIMITED TO, ANY DAMAGES RESULTING FROM INCONVENIENCE, LOSS OF TIME, DATA, PROPERTY, REVENUE, OR PROFIT OR ANY INDIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES, EVEN IF RadioShack HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

Some states do not allow the limitations on how long an implied warranty lasts or the exclusion of incidental or consequential damages, so the above limitations or exclusions may not apply to you.

In the event of a product defect during the warranty period, take the product and the RadioShack sales receipt as proof of purchase date to any RadioShack store. RadioShack will, at its option, unless otherwise provided by law: (a) correct the defect by product repair without charge for parts and labor; (b) replace the product with one of the same or similar design; or (c) refund the purchase price. All replaced parts and products, and products on which a refund is made, become the property of RadioShack. New or reconditioned parts and products may be used in the performance of warranty service. Repaired or replaced parts and products are warranted for the remainder of the original warranty period. You will be charged for repair or replacement of the product made after the expiration of the warranty period.

This warranty does not cover: (a) damage or failure caused by or attributable to acts of God, abuse, accident, misuse, improper or abnormal usage, failure to follow instructions, improper installation or maintenance, alteration, lightning or other incidence of excess voltage or current; (b) any repairs other than those provided by a RadioShack Authorized Service Facility; (c) consumables such as fuses or batteries; (d) cosmetic damage; (e) transportation, shipping or insurance costs; or (f) costs of product removal, installation, set-up service adjustment or reinstallation.

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

RadioShack Customer Relations, Dept. W, 100 Throckmorton St., Suite 600, Fort Worth, TX 76102

We Service What We Sell *3/97*

RadioShack
A Division of Tandy Corporation
Fort Worth, Texas 76102

7A8

Printed in Hong Kong